

**OFFICE OF THE STATE FIRE MARSHAL
STATE OF ILLINOIS**

Statute, Rule or Standard Policy Interpretation: **Venting and Fueling of Integral Diesel Fuel Tanks Supplying Generators**

Title:	Storage, Transportation, Sale and Use of Gasoline and Volatile Oils: Rule and Regulations Relating to General Storage
Part:	41 Ill. Adm. Code 160 and Policy Interpretation on the “Indoor Storage Tanks of Flammable and Combustible Liquids” (07-TS-004, effective April 2007)
Section Number:	Multiple Sections
Section Title:	Multiple Sections
Policy Number:	12-FP-001

Purpose: This instruction provides guidance to ensure uniform enforcement of Part 160 rules with respect to integral fuel tanks containing combustible liquids used to supply emergency generators (“generator”) and vents that terminate inside of the engine compartment.

Scope: Statewide

Current Code: The Part 160 rules provide only limited guidance on indoor tanks. Therefore, OSFM Policy 07-TS-004, effective April 2007 was developed to address indoor issues. However, even with that policy there remains no specific guidance relative to the venting and filling of an integral AST used to supply fuel to an emergency generator.

Policy: It is the policy of the Office of the Illinois State Fire Marshal that when an integral fuel supply tank for a generator is located inside of any occupancy, building or any modular structure, even if that structure serves solely to contain the emergency generator and tank, that the tank and its venting must comply with Part 160 and the requirements of the Policy on the “*Indoor Storage Tanks of Flammable and Combustible Liquids*” which require that the tank’s vents and fill piping terminate outside of the building or structure.

However, in those situations where the generator is integrated with the fuel supply tank and is located outside of a building or structure and the fuel contained is a combustible liquid (typically diesel fuel and as opposed to a “flammable liquid”), the fuel tank is allowed to have vents terminate inside the generator housing provided the compartment is louvered on multiple sides and the louvers are located or extend to the lower portion of the walls or doors of the housing. If the generator compartment is not louvered, the tank vents must extend to the outside of the generator compartment.

Furthermore, for such integrated generator fuel tanks located outside of a building or structure, the fuel fill port may be located in the generator housing whether louvered or not provided the fill cap is a tight-fit.

Reason: Louvers located in the lower portion of the generator enclosure provide natural ventilation and therefore venting the tank to the outside of the generator compartment is not required. Combustible liquid vapors are heavier than air and pool at the bottom of the housing so louvers must be located in the lower portion of the compartment to ensure natural air flow. Combustible liquid vapors have not proven problematic when tight

fitting fuel caps are used. Furthermore, NFPA 70 *National Electrical Code* does not require specific electrical equipment or installations when combustible liquid vapors (as opposed to flammable liquid vapors) are present.

Other References: Also see OSFM Policy 07-TS-008 regarding separation distances for ASTs supplying emergency generators.

Effective Date: August 2012